

**State Plan Number  
0530-020-12-1000**

**EDUCATIONAL SPECIFICATIONS**

**Renovations to the Science Rooms at:**

**BRICK TOWNSHIP HIGH SCHOOL**

**for the**

**BRICK TOWNSHIP BOARD OF EDUCATION**

**Brick Township, Ocean County, New Jersey**

**CERTIFICATE**

In accordance with N.J.A.C. 6A:26-5.1, the Educational Specifications for the additions and renovations contained herein describing the programs and activities to be housed in the proposed facility, the types, numbers and sizes in square feet of spaces within the proposed facility and the spatial relationships between and among those spaces have been approved by the Brick Township Board of Education in a resolution.

Approved by the Brick Township Board of Education

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Sharon Kight  
President, Board of Education  
Brick Township Board of Education

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Walter Hrycenko  
Superintendent of Schools  
Brick Township Public Schools

Revision 1 2-10-12

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# **SECTION A**

## **Mission Statement**

The Brick Township Board of Education looks forward to serving the Brick School District in a functional, flexible facility designed to meet the needs of our diverse student population. The Board recognizes that this facility, both form and function, needs to support an environment that encourages high-quality teaching and learning with a strong emphasis on students' needs. Such a facility will foster interdisciplinary instruction and integration of learning experiences by providing easy access among allied departments as well as easy access to major resource areas and information centers.

The district accepts the responsibility for coordinating the available resources of home, school, and community in a mutual effort to guide every pupil's growth in becoming a self-respecting individual who can effectively function politically, economically, and socially in a democratic society.

The renovated science rooms are designed to support a technology driven curriculum. They will contain a backbone distribution system, horizontal cable distribution systems, and at least two communication outlets per room.

# SECTION B

## Overview

### Educational Specifications:

Type of Facility: Science Laboratory Renovations

Number Needed: Eleven (11)

- 1 Physics
- 3 Chemistry
- 6 Life Science
- 1 Physics / Life Science

Desired Class Size: Twenty-four (24)

Number Teachers/aides: One (1) per lab

### Description of functions and activities:

Each lab (6 Life Science, 3 Chemistry, 1 Physics, and 1 Physics/Life Science) is to be adaptable as programs dictate with a demonstration station for the teacher. Instruction will include a variety of techniques and equipment consisting of lecture, discussion, cooperative learning, simulations, and experiments as well as small hands-on projects relating to biology, environmental science, chemistry, and/or physics.

### Identification of functions and activities:

Labs will be created to support the instructional techniques mentioned under description of functions. They will include island type, peninsula type, and lab tables. Each lab will be equipped with:

- a) one (1) safety station equipped with fire extinguisher, fire blanket, eye wash, and deluge shower;
- b) hot and cold water, gas, compressed air (physics only), and electrical outlets as described in section "C";
- c) each lab will have either desktop or wireless capability;
- d) fumes hoods shall be incorporated in the counter space requirements in the prep rooms.

**SECTION C**  
**INSTRUCTIONAL SPACES**

**Background Information:**

School: Brick Township High School  
School District: Brick Township School District  
County: Ocean

**Educational Specification:**

Type of Facility: **Chemistry Science Lab (Renovated)**  
Room Numbers: **101, 103, 105**  
Desired Class Size: Twenty-four (24)  
Number Teachers/aides: One (1) per lab

**Description of functions and activities:**

These are to be used as **Chemistry** laboratory / classrooms, adaptable for all disciplines as programs dictate. Science shall be equipped with a demonstration station for the teacher. Instruction will be accomplished using a variety of techniques and equipment consisting of lecture, discussion, cooperative learning, simulations and experiments as well as small hands on projects relating to chemistry.

**Identification of functions and activities:**

Labs will be created to support the instructional techniques mentioned under description of functions. The student stations shall be island type. One (1) safety center w/ eye wash and deluge shower shall be required. Room shall also be equipped with fire blanket and fire extinguisher. Utilities shall be provided based on **Section D** of these educational specifications and each lab will have either desktop and/or wireless capability.

Marker boards/tack boards will be used as well as built in smart boards. Labs will be equipped with a multimedia system including projection capability. Ambient lighting is to be controlled. Student workstation shall be sized to accommodate adequate adjacent experiments, which may require the use of water, gas and electrical power as well as writing needs. The computer-equipped portion of the workstation may or may not be mobile.

**Laboratory and Class Area:**

|  |       |
|--|-------|
| 24 students @ 20 sq. ft.               | = 480 |
| 1 teacher @ 20 sq. ft.                 | = 20  |
| 24 student chairs @ 4 sq. ft.          | = 96  |
| 6 student lab stations w/ 24 chairs    | = 150 |
| 1 teacher demonstration station        | = 16  |
| 12lf of counter space w/ base cabinets | = 30  |
| 1 safety center                        | = 8   |
| 3 tall storage cabinet                 | = 24  |

**Space required = 824sf**

**Space provided (min) = 940sf**

**Identification of space relationships:**

Each of these labs will be provided with a small prep room adjacent to the main laboratory. Prep rooms shall be equipped with the following:

- Fume hood
- Barrier free sink
- Safety center
- Flammable / acid safety cabinet
- Combination counter height cabinets / tall storage
- Teacher desk height work space
- Tall wardrobe cabinet

Utilities shall include hot and cold water, multiple electrical outlets at all stations, and each lab will have either desktop and/or wireless capability.

Prep Room 101A and Prep Storage 101B =335 sf

Prep Room 105A and Prep Storage 105B =220 sf

**Background Information:**

School: Brick Township High School  
School District: Brick Township School District  
County: Ocean

**Educational Specification:**

Type of Facility: **Life Science Lab (Renovated)**  
Room Numbers: **102, 104**  
Desired Class Size: Twenty-four (24)  
Number Teachers/aides: One (1) per lab

**Description of functions and activities:**

These are to be used as **Life Science** laboratory / classrooms, adaptable for all disciplines as programs dictate. Science shall be equipped with a demonstration station for the teacher. Instruction will be accomplished using a variety of techniques and equipment consisting of lecture, discussion, cooperative learning, simulations and experiments as well as small hands on projects relating to the various life science disciplines.

**Identification of functions and activities:**

Labs will be created to support the instructional techniques mentioned under description of functions. The student stations shall be peninsula type. One (1) safety center w/ eye wash and deluge shower shall be required. Room shall also be equipped with fire blanket and fire extinguisher. Utilities shall be provided based on **Section D** of these educational specifications and each lab will have either desktop and/or wireless capability.

Marker boards/tack boards will be used as well as built in smart boards. Labs will be equipped with a multimedia system including projection capability. Ambient lighting is to be controlled. Student workstation shall be sized to accommodate adequate adjacent experiments, which may require the use of water, gas and electrical power as well as writing needs. The computer-equipped portion of the workstation may or may not be mobile.

**Laboratory and Class Area:**

|   |       |
|---|-------|
| 24 students @ 20 sq. ft.                          | = 480 |
| 1 teacher @ 20 sq. ft.                            | = 20  |
| 12 student table @ 9.5 sq. ft. (movable)          | = 114 |
| 1 teacher demonstration station                   | = 16  |
| 62 lf of counter space w/ base cabinets & BF sink | = 155 |
| 1 safety center                                   | = 8   |
| 1 microscope cabinet                              | = 8   |
| 1 tall storage cabinet                            | = 8   |

**Space required = 809sf**

**Space provided (min) = 824sf**



**Identification of space relationships:**

Each of these labs shall have access to remote Prep Room 105A located across the adjacent corridor. See Chemistry lab description for unique features.

**Background Information:**

School: Brick Township High School  
School District: Brick Township School District  
County: Ocean

**Educational Specification:**

Type of Facility: **Physics Lab (Renovated)**  
Room Numbers: **11**  
Desired Class Size: Twenty-four (24)  
Number Teachers/aides: One (1) per lab

**Description of functions and activities:**

These are to be used as **Physics** laboratory / classrooms, adaptable for all disciplines as programs dictate. Science shall be equipped with a demonstration station for the teacher. Instruction will be accomplished using a variety of techniques and equipment consisting of lecture, discussion, cooperative learning, simulations and experiments as well as small hands on projects relating to physics.

**Identification of functions and activities:**

Labs will be created to support the instructional techniques mentioned under description of functions. The student stations shall be island type. One (1) safety center w/ eye wash and deluge shower shall be required. Room shall also be equipped with fire blanket and fire extinguisher. Utilities shall be provided based on **Section D** of these educational specifications and each lab will have either desktop and/or wireless capability.

Marker boards/tack boards will be used as well as built in smart boards. Labs will be equipped with a multimedia system including projection capability. Ambient lighting is to be controlled. Student workstation shall be sized to accommodate adequate adjacent experiments, which may require the use of water, gas, compressed air and electrical power as well as writing needs. The computer-equipped portion of the workstation may or may not be mobile.

This room will be unique in that a pipe grid will be installed at the ceiling. This will enhance the physics program educational delivery through a variety of experiments which includes weights, pulleys, etc.

**Laboratory and Class Area:**

|  |       |
|--|-------|
| 24 students @ 20 sq. ft.               | = 480 |
| 1 teacher @ 20 sq. ft.                 | = 20  |
| 24 student chairs @ 4 sq. ft.          | = 96  |
| 6 student lab stations w/ 24 chairs    | = 150 |
| 1 teacher demonstration station        | = 16  |
| 12lf of counter space w/ base cabinets | = 30  |

|                               |                                      |
|-------------------------------|--------------------------------------|
| 1 safety center               | = 8                                  |
| 3 tall storage cabinet        | = 24                                 |
| 14lf Book shelving            | = 21                                 |
| <b>Space required = 845sf</b> | <b>Space provided (min) = 1070sf</b> |

**Identification of space relationships:**

Each of these labs will be provided with a small prep room adjacent to the main laboratory. Prep rooms shall be equipped with the following:

- Barrier free sink
- Safety center
- Flammable / acid safety cabinet
- Combination counter height cabinets / tall storage
- Teacher desk height work space
- Tall wardrobe cabinet
- Refrigerator / freezer

Utilities shall include hot and cold water, multiple electrical outlets at all stations, and each lab will have either desktop and/or wireless capability.

Prep Room 11A and Prep Storage 11B = 340 sf

**Background Information:**

School: Brick Township High School  
School District: Brick Township School District  
County: Ocean

**Educational Specification:**

Type of Facility: **Physics / Life Science Lab (Renovated)**  
Room Numbers: **12**  
Desired Class Size: Twenty-four (24)  
Number Teachers/aides: One (1) per lab

**Description of functions and activities:**

These are to be used as **Physics / Life Science Lab** laboratory / classrooms, adaptable for all disciplines as programs dictate. Science shall be equipped with a demonstration station for the teacher. Instruction will be accomplished using a variety of techniques and equipment consisting of lecture, discussion, cooperative learning, simulations and experiments as well as small hands on projects relating to physics as well as life sciences.

**Identification of functions and activities:**

Labs will be created to support the instructional techniques mentioned under description of functions. The student stations shall be island type. One (1) safety center w/ eye wash and deluge shower shall be required. Room shall also be equipped with fire blanket and fire extinguisher. Utilities shall be provided based on **Section D** of these educational specifications and each lab will have either desktop and/or wireless capability.

Marker boards/tack boards will be used as well as built in smart boards. Labs will be equipped with a multimedia system including projection capability. Ambient lighting is to be controlled. Student workstation shall be sized to accommodate adequate adjacent experiments, which may require the use of water, gas, compressed air and electrical power as well as writing needs. The computer-equipped portion of the workstation may or may not be mobile.

**Laboratory and Class Area:**

|  |       |
|--|-------|
| 24 students @ 20 sq. ft.                         | = 480 |
| 1 teacher @ 20 sq. ft.                           | = 20  |
| 24 student chairs @ 4 sq. ft.                    | = 96  |
| 6 student lab stations w/ 24 chairs              | = 150 |
| 1 teacher demonstration station                  | = 16  |
| 8 lf of counter space w/ base cabinets & BF sink | = 20  |
| 1 safety center                                  | = 8   |

|                               |   |                                      |
|-------------------------------|---|--------------------------------------|
| 1 microscope cabinet          | = | 8                                    |
| 1 tall storage cabinet        | = | 8                                    |
| 2 specimen sinks              | = | 20                                   |
| 14lf Book shelving            | = | 21                                   |
| <b>Space required = 847sf</b> |   | <b>Space provided (min) = 1070sf</b> |

**Identification of space relationships:**

Each of these labs will be provided with a small prep room adjacent to the main laboratory. Prep rooms shall be equipped with the following:

- Barrier free sink
- Safety center
- Flammable / acid safety cabinet
- Combination counter height cabinets / tall storage
- Teacher desk height work space
- Tall wardrobe cabinet

Utilities shall include hot and cold water, multiple electrical outlets at all stations, and each lab will have either desktop and/or wireless capability.

Prep Room 11A and Prep Storage 11B = 340 sf

**Background Information:**

School: Brick Township High School  
School District: Brick Township School District  
County: Ocean

**Educational Specification:**

Type of Facility: **Life Science Lab (Renovated)**  
Room Numbers: **301, 303, 305, 307**  
Desired Class Size: Twenty-four (24)  
Number Teachers/aides: One (1) per lab

**Description of functions and activities:**

These are to be used as **Life Science** laboratory / classrooms, adaptable for all disciplines as programs dictate. Science shall be equipped with a demonstration station for the teacher. Instruction will be accomplished using a variety of techniques and equipment consisting of lecture, discussion, cooperative learning, simulations and experiments as well as small hands on projects relating to life science.

**Identification of functions and activities:**

Labs will be created to support the instructional techniques mentioned under description of functions. The student stations shall be island type. One (1) safety center w/ eye wash and deluge shower shall be required. Room shall also be equipped with fire blanket and fire extinguisher. Utilities shall be provided based on **Section D** of these educational specifications and each lab will have either desktop and/or wireless capability.

Marker boards/tack boards will be used as well as built in smart boards. Labs will be equipped with a multimedia system including projection capability. Ambient lighting is to be controlled. Student workstation shall be sized to accommodate adequate adjacent experiments, which may require the use of water, gas and electrical power as well as writing needs. The computer-equipped portion of the workstation may or may not be mobile.

**Laboratory and Class Area:**

|  |       |
|--|-------|
| 24 students @ 20 sq. ft.                         | = 480 |
| 1 teacher @ 20 sq. ft.                           | = 20  |
| 6 student lab stations w/ 24 chairs              | = 160 |
| 1 teacher demonstration station                  | = 16  |
| 22 lf of counter space w/base cabinets & BF sink | = 55  |
| 1 safety center                                  | = 8   |

1 microscope cabinet = 8  
1 tall storage cabinet = 8

**Space required = 755sf**

**Space provided (min) = 990sf**

**Identification of space relationships:**

Each of these labs will be provided with a small prep room adjacent to the main laboratory. Prep rooms shall be equipped with the following:

- Fume hood (Room number 301A)
- Environmental center (Room number 305A)
- Barrier free sink
- Safety center
- Flammable / acid safety cabinet
- Combination counter height cabinets / tall storage
- Teacher desk height work space
- Tall wardrobe cabinet
- Refrigerator / freezer

Utilities shall include hot and cold water, multiple electrical outlets at all stations, and each lab will have either desktop and/or wireless capability.

Prep Room 301A and Prep Storage 301B = 395 sf  
Prep Room 305A and Prep Storage 305B = 395 sf

## SECTION D

### Utility Matrix

Type of Facility: **Chemistry Science Lab (Renovated)**  
Room Numbers: **101, 103, 105**

Teacher Demonstration CW  
HW  
Gas  
Electric  
Data

Student Stations CW  
HW  
Gas  
Electric  
Data

Prep Rooms CW  
HW  
Gas  
Electric  
Data  
ACID Neutralization

Inside Fume Hood CW  
HW  
Gas  
Electric



Type of Facility: **Life Science Lab (Renovated)**  
Room Numbers: **102, 104**

Teacher Demonstration CW  
HW  
Gas  
Electric  
Data

Student Stations CW  
HW  
Electric  
Data

Prep Rooms CW  
HW  
Gas  
Electric  
Data

Inside Fume Hood NOT APPLICABLE

Type of Facility: **Physics Lab (Renovated)**  
Room Numbers: **11**

Teacher Demonstration CW  
HW  
Gas  
Electric  
Data  
Compressed Air

Student Stations CW  
HW  
Gas  
Electric  
Data  
Compressed Air

Prep Rooms CW  
HW  
Gas  
Electric  
Data  
Compressed Air

Inside Fume Hood CW  
HW  
Gas  
Electric  
Compressed Air

**FUME HOOD WILL BE SHARED WITH ROOM NO. 12**

Type of Facility: **Physics / Life Science Lab (Renovated)**  
Room Numbers: **12**

Teacher Demonstration CW  
HW  
Gas  
Electric  
Data  
Compressed Air

Student Stations CW  
HW  
Gas  
Electric  
Data  
Compressed Air

Prep Rooms CW  
HW  
Gas  
Electric  
Data  
Compressed Air

Inside Fume Hood CW  
HW  
Gas  
Electric  
Compressed Air

Type of Facility: **Life Science Lab (Renovated)**  
Room Numbers: **301,303, 305, 307**

Teacher Demonstration CW  
HW  
Gas  
Electric  
Data

Student Stations CW  
HW  
Electric  
Data

Prep Rooms CW  
HW  
Gas  
Electric  
Data

Inside Fume Hood CW  
HW  
Gas  
Electric